

32  
4. (Amended) A semiconductor laser device according to claim 2, wherein said spacer layer has a p-type electrical conductivity, and a carrier concentration at said interface between said spacer layer and said optical guide layer is more than  $5 \times 10^{16} \text{ cm}^{-3}$  and less than  $5 \times 10^{17} \text{ cm}^{-3}$ .

B3  
6. (Amended) A method of manufacturing a semiconductor laser device, comprising the steps of sequentially forming, on an n-type substrate, an n-type doped buffer layer, an n-type doped cladding layer, a first undoped optical guide layer, an undoped quantum well active layer, a second undoped optical guide layer, p-type doped cladding layer, and a p-type doped cap layer by vapor phase growth method, further comprising:

forming an undoped spacer layer between said second undoped optical guide layer and said p-type doped cladding layer,

wherein an interface is formed between said spacer layer and said second undoped optical guide layer.

BA  
17. (Amended) The method of manufacturing a semiconductor laser device of claim 16, wherein said stripe-shaped ridge has a width of 2 - 3  $\mu\text{m}$ .

B5  
19. (Amended) The method of manufacturing a semiconductor laser device of claim 18, wherein said stripe-shaped ridge has a width of 4 - 5  $\mu\text{m}$ .

35  
contd.

20. (Amended) ~~The method of manufacturing a semiconductor laser device of claim 18, wherein said step of forming an n-type current block layer comprises forming an n-type electric current block layer and said n-type current block layer.~~

21. (Amended) The method of manufacturing a semiconductor laser device of claim 20, wherein said stripe-shaped ridge has a width of 2 - 2.5  $\mu\text{m}$ .

Please add the following new claims:

13  
23. (New) A semiconductor laser device having a quantum well active layer disposed between a pair of cladding layers and an optical guide layer disposed between at least one of the cladding layers and the quantum well active layer,

34  
wherein

a spacer layer consisting of a single layer of a thickness of 5 nm or more but below 10 nm is disposed between the optical guide layer and a p-type cladding layer, the spacer layer being in contact with both the optical guide layer and the p-type cladding layer.

14  
24. (New) 13  
A semiconductor laser device according to claim 23, wherein said spacer layer has a p-type electrical conductivity, and a carrier concentration at an interface between said spacer layer and said optical guide layer is more than  $5 \times 10^{16} \text{ cm}^{-3}$  but less than  $5 \times 10^{17} \text{ cm}^{-3}$ .

17 ~~25~~. (New) A semiconductor laser device having a quantum well active layer disposed between a pair of cladding layers and an optical guide layer disposed between at least one of the cladding layers and the quantum well active layer, wherein

B6 cont'd.  
a spacer layer consisting of a single layer and having a p-type electrical conductivity is disposed between the optical guide layer and a p-type cladding layer, the spacer layer being in contact with both the optical guide layer and the p-type cladding layer, and a carrier concentration at an interface between the spacer layer and the optical guide layer is more than  $5 \times 10^{16} \text{ cm}^{-3}$  but less than  $5 \times 10^{17} \text{ cm}^{-3}$ .

15 ~~26~~. (New) A semiconductor laser device according to claim <sup>13</sup>~~23~~, wherein said p-type cladding layer has a carrier concentration in a range of from  $8 \times 10^{17} \text{ cm}^{-3}$  to  $5 \times 10^{18} \text{ cm}^{-3}$ .

18 ~~27~~. (New) A semiconductor laser device according to claim <sup>17</sup>~~25~~, wherein said p-type cladding layer has a carrier concentration in a range of from  $8 \times 10^{17} \text{ cm}^{-3}$  to  $5 \times 10^{18} \text{ cm}^{-3}$ .

16 ~~28~~. (New) A semiconductor laser device according to claims <sup>13</sup>~~23~~, wherein said spacer layer has a composition identical to that of said p-type cladding layer or is larger than said p-type cladding layer in band gap.

19 29. (New) A semiconductor laser device according to claims 25, wherein said spacer layer has a composition identical to that of said p-type cladding layer or is larger than said p-type cladding layer in band gap.

31b  
centered

30. (New) A method of manufacturing a semiconductor laser device, comprising the steps of sequentially forming, on an n-type substrate, an n-type doped buffer layer, an n-type doped cladding layer, a first undoped optical guide layer, an undoped quantum well active layer, a second undoped optical guide layer, p-type doped cladding layer, and a p-type doped cap layer by a vapor phase growth method, comprising:

forming an undoped spacer layer consisting of a single layer of a thickness of 5 nm or more but below 10 nm between said second undoped optical guide layer and said p-type doped cladding layer in such a manner that said spacer layer is in contact with said second undoped optical guide layer and said p-type doped cladding layer.

31. (New) A method of manufacturing a semiconductor laser device according to claim 30, wherein each of said layers is formed by a MOCVD method and under a condition in which a growth temperature is from 650°C to 800°C both inclusive, and a ratio of a feed rate of a group V source to that of a group III source is from 50 to 200 both inclusive.